

**Translation**

**PATENT COOPERATION TREATY**

**PCT**

**INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**  
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>2003P00857WO</b>	FOR FURTHER ACTION	See Form PCT/IPEA/416
International application No. <b>PCT/EP2004/006255</b>	International filing date (day/month/year) <b>09.06.2004</b>	Priority date (day/month/year) <b>12.06.2003</b>
International Patent Classification (IPC) or national classification and IPC		
Applicant <b>BSH BOSCH UND SIEMENS HAUSGERÄTE GMBH</b>		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 11 sheets, including this cover sheet.

3. This report is also accompanied by ANNEXES, comprising:

a. ☒ (sent to the applicant and to the International Bureau) a total of 7 sheets, as follows:

☒ sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).

☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.

b. ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) \_\_\_\_\_, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

☒ Box No. I Basis of the report

☐ Box No. II Priority

☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

☐ Box No. IV Lack of unity of invention

☒ Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

☐ Box No. VI Certain documents cited

☐ Box No. VII Certain defects in the international application

☒ Box No. VIII Certain observations on the international application

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

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## Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This report is based on translations from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of:

- ☐ international search (Rule 12.3 and 23.1(b))  
☐ publication of the international application (Rule 12.4)  
☐ international preliminary examination (Rule 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

☐ the international application as originally filed/furnished

☒ the description:

pages 3-10 as originally filed/furnished

pages\* 1, 2, 2A received by this Authority on 21.02.2005 with letter of 18.02.2005

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

☒ the claims:

nos. \_\_\_\_\_ as originally filed/furnished

nos.\* \_\_\_\_\_ as amended (together with any statement) under Article 19

nos.\* 2-14 received by this Authority on 21.02.2005 with letter of 18.02.2005

nos.\* 1 received by this Authority on 15.07.2005 with letter of 14.07.2005

☒ the drawings:

sheets 1/4-4/4 as originally filed/furnished

sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages \_\_\_\_\_

☐ the claims, nos. \_\_\_\_\_

☐ the drawings, sheets/figs \_\_\_\_\_

☐ the sequence listing (*specify*): \_\_\_\_\_

☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

☐ the description, pages \_\_\_\_\_

☐ the claims, nos. \_\_\_\_\_

☐ the drawings, sheets/figs \_\_\_\_\_

☐ the sequence listing (*specify*): \_\_\_\_\_

☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

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Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1. Statement			
Novelty (N)	Claims	2-5, 7-10, 13, 14	YES
	Claims	1, 6, 11, 12	NO
Inventive step (IS)	Claims	5	YES
	Claims	2-4, 7-10, 13, 14	NO
Industrial applicability (IA)	Claims	1-14	YES
	Claims		NO
2. Citations and explanations (Rule 70.7)			
1. Reference is made to the following documents:			
D1: EP 0 781 881 A			
D2: WO 03/010380 A			
D3: EP 0 657 576 A			
2. The application does not meet the requirements of PCT Article 6 because independent <u>claim 1</u> is unclear.			
In the amended <u>claim 1</u> the rotational speeds are defined by vague, relative terms which do not have any generally recognised technical meaning and are subject to the subjective understanding of each particular reader. As a result, the subject matter of the claim is not clearly defined (PCT Article 6).			
For example, the rotational speed (n3) of the at least one further phase (B) of high washing mechanics is defined, <i>inter alia</i> , in that at those rotational speeds the items of washing are "highly compressed" and "rub heavily against each other"			

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(see claim 1, lines 10-13). However, the expressions "highly compressed" and "rub heavily against each other" are relative terms which are dependent on the subjective understanding of the reader and also on the items of washing to be washed.

In addition, the second rotational speed ( $n_2$ ) is defined in that it lies "significantly below the rotational operating speed" (see claim 1, lines 7 and 8). However, "significantly" is also a subjective term.

Furthermore, the nominal value of the first rotational speed ( $n_1$ ) is defined by the result to be achieved (see claim 1, lines 17-25), said result to be achieved being vaguely defined. For example, depending on the load and the type of washing, each rotational speed lying above the rotational operating speed finally can produce "a sufficiently large free area" so that during subsequent counter rotation, the items of washing becoming detached can roll in the free area.

Therefore, the only information that can be taken from claim 1 is that the rotational speed ( $n_3$ ) in the phase (B) of high washing mechanics lies at least below the rotational operating speed, that the second rotational speed ( $n_2$ ) lies "significantly" below the rotational operating speed and that the first rotational speed ( $n_1$ ) lies "significantly" above the rotational

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operating speed.

3. In addition, irrespective of the above-mentioned lack of clarity, the subject matter of independent claims 1 and 11, and of dependent claims 6 and 12, lacks novelty (PCT Article 33(2)).

- a. Document D1 discloses all the features of the preamble of independent claim 1 (see D1, column 3, lines 15 - 42, column 4, line 40 - column 5, line 45, figures 1-4):

- method for improving the washing effect on non-delicate items of washing which are to be washed in a washing machine comprising a washing drum, which during the washing and rinsing process is intermittently driven in alternating directions of rotation, wherein in one phase the washing drum is accelerated in one direction of rotation to a first rotational speed (N3, 6c) that lies significantly above the rotational operating speed and in the other direction of rotation is accelerated to a second rotational speed (N1, 6b) that lies "significantly" below the rotational operating speed, and wherein, during the washing and/or rinsing process, the washing drum is accelerated in at least one further phase (6b) in both directions of rotation to rotational speeds (N1, N2) at which the individual items of washing are "highly compressed" and "rub heavily against

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each other", said phases following one another at least once during the washing and/or rinsing process (see D1, figure 1).

Document D1 also implicitly discloses all the features from the characterising part of claim 1, for the following reasons:

- the first rotational speed (N3) in D1 can adopt a value of 300 UpM to 400 UpM and the second rotational speed (N1) a value of 35 UpM (see D1, claim 4).
- the disclosure of the present application indicates that a first rotational speed of +150 UpM or a circumferential speed of 3.7 m/s is adequate for producing a sufficiently free area by compression of the items of washing inside the drum so that subsequently, when accelerating the washing drum in the opposite direction to 35 UpM or to a circumferential speed of less than 1.0 m/s, the outer-lying items of washing becoming detached can roll in the free area (see claims 1, 2 and 5, and page 8, lines 18-29 of the present application).

The first rotational speed (N3) in D1 thus lies significantly above the first rotational speed disclosed in the embodiment of the present application and therefore the first rotational speed in D1 must compress the washing as heavily

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as does the first rotational speed in the present application, thereby producing an at least equally large "sufficiently free area".

It therefore remains to be clarified whether the first rotational speed (N3) disclosed in D1, with a value of 300 UpM to 400 UpM, also results in the "items of washing **being able to fall** from the drum casing when the rotational speed of the drum is subsequently reduced", in D1 the rotational speed being reduced to 0 UpM and then the drum being accelerated in the opposite direction to a speed of 35 UpM. This must, however, be the case, since items of washing can always fall from the drum casing as soon as the rotational speed falls below the rotational operating speed.

Consequently, D1 discloses not only all the features from the preamble of independent claim 1, but also implicitly discloses all the features from the characterising part of the claim. The subject matter of claim 1 thus lacks novelty (PCT Article 33(2)).

- b. D1 also discloses all the features of independent claim 11, more particularly a (see D1, column 3, lines 15 - 42, column 4, line 40 - column 5, line 45, figures 1-4) washing machine that is suitable for implementing the aforementioned method and in which a rotational speed control device drives the washing drum intermittently in alternating directions of rotation (see figures 1

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	<p>and 2) at different rotational speeds (N1, N2, N3). The subject matter of claim 11 thus lacks novelty (PCT Article 33(2)).</p> <p>c. Finally, D1 discloses all the additional features of claims <u>6 and 12</u>, in particular that the acceleration of the washing drum is interrupted when the imbalance is too great (see D1, column 5, lines 40-45, claim 2). The subject matter of those claims therefore also lacks novelty (PCT Article 33(2)).</p> <p>4. Irrespective of the aforementioned lack of clarity, the subject matter of dependent <u>claims 2-4, 6-10 and 12-14</u> does not involve an inventive step (PCT Article 33(3)).</p> <p>a. The additional features of dependent <u>claims 2-4</u> are already suggested by D1, insofar as a person skilled in the art would use the rotational speeds indicated in D1 in terms of revolutions per minute in a washing machine comprising a conventional washing drum with a diameter of approximately 0.47 m.</p> <p>b. Document D1 already refers to the problem of foaming (column 4, lines 50-53). Consequently, a person skilled in the art proceeding from D1 would, in order to overcome the problems caused by foaming, apply the foam-monitoring device described in D3 (see D3, the abstract and claims 1-4) to the method and the washing machine from D1</p>



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and would thus arrive at the same solution as that indicated in dependent claims 6 and 12 of the present application.

- c. Finally, D1 already indicates that the rotational speed profile and the duration of the first rotational speed can be adapted to the type of material and to the washing programme selected (see D1, column 5, lines 17-21 and 28-39, claim 5). Consequently, at least one solution proposed in dependent claims 7-10, 13 and 14 is already suggested by D1.
5. The combination of features proposed in dependent claim 5 is neither disclosed nor suggested by the available prior art. More particularly, no document discloses a first rotational speed with a circumferential speed of 3.7 m/s, **that is approximately 150 UpM**, in a standard drum (see page 6, line 23). Therefore, the disadvantages indicated in the application description of too low (see page 6, lines 5-21) or too high a circumferential speed, which could result in unstable washing, are overcome. The subject matter of claim 5 therefore involves an inventive step (PCT Article 33(3)).

The applicant should also note that dependent claims 7-10 refer, *inter alia*, to a change in rotational speed and are therefore inconsistent with dependent claim 5, which firmly defines the rotational speeds (PCT Article 6).

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**Box No. VIII**      **Certain observations on the international application**

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

See Box V.2